

AMENDMENTIN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A scanning device ~~for reducing compensation memory requirement~~, comprising:

~~an input device for inputting an even data value and an odd data value;~~

~~an application specific integrated circuit coupled to the input device, wherein the application specific integrated circuit is adapted to:~~

~~for receiving receive the an even data value obtained from an even-numbered pixel of the scanning device and the an odd data value obtained from an odd-numbered pixel of the scanning device;~~

~~, performing perform a computation using the even data value, the odd data value and a preset value to produce an even compensation value and an odd compensation value;~~

~~, and averaging average the even compensation value and the odd compensation value to produce an averaged odd-even compensation value; and~~

~~a compensation memory unit coupled to the application specific integrated circuit for holding the averaged odd-even compensation value.~~

~~compensate an even-numbered pixel value and an odd-numbered pixel value obtained from the scanning device by using the odd-even compensation value.~~

2. (Currently Amended) The scanning device of claim 1, wherein the scanning device further includes:

~~an image memory unit coupled to the application specific integrated circuit for holding a plurality of image data values; and~~

~~an input/output interface coupled to the application specific integrated circuit for accessing the image data values.~~

3. (Currently Amended) The scanning device of claim 1, wherein the input-scanning device further includes:

an alternative-sensing device, wherein the alternative-sensing device performs a plurality of alternate scanning operations on a document and sequentially obtains a plurality of alternately scanned pixels; and

an analogue/digital converter coupled to the alternative-sensing device for digitizing the alternately scanned pixel data in analogue format into even data values and odd data values and transferring the even data values and the odd data values to the application specific integrated circuit.

4. (Currently Amended) The scanning device of claim 1, wherein the input device further includes further comprising:

a linear sensing device, wherein the linear sensing device performs a plurality of linear scanning operations on a document and sequentially obtains a plurality of linearly scanning pixels; and

an analogue/digital converter coupled to the linear sensing device for digitizing the linearly scanned pixel data in analogue format into even data values and odd data values and transferring the even data values and the odd data values to the application specific integrated circuit.

5. (Currently Amended) A scanning method for reducing memory capacity requirement of a compensation memory unit, of performing a scanning operation, comprising the steps of:

providing-receiving an even compensation value for compensating an even-numbered pixels pixel and an odd compensation value for compensating an odd-numbered pixels pixel; and

averaging the even compensation value and the odd compensation value to produce an averaged odd-even compensation value; and

using the odd-even compensation value to compensate an even-numbered pixel value and an odd-numbered pixel value.

6. (Cancelled)

7. (New) The method of claim 5, wherein the even-numbered pixel value and the odd-numbered pixel value are obtained substantially by a process comprising:

performing a plurality of alternate scanning operations on a document to obtain values corresponding to a plurality of alternately scanned pixels; and

digitizing the alternately scanned pixel values into even data values and odd data values; and

providing the even data values and the odd data values to the an application specific integrated circuit.

8. (New) The method of claim 5, wherein compensating the even-numbered pixel value and the odd-numbered pixel value comprises adding a corresponding odd-even compensation value to the even-numbered pixel value and the odd-numbered pixel value.

9. (New) A method, comprising:

receiving a value from an even-numbered pixel and an odd-numbered pixel of a scanning device;

producing an odd-even compensation value by use of the even-numbered pixel value and the odd-numbered pixel value; and

using the odd-even compensation value to compensate an even-numbered pixel value and an odd-numbered pixel value obtained from a scanning operation.

10. (New) The method of claim 9, wherein the even-numbered pixel value and the odd-numbered pixel value are obtained substantially by a process comprising:

performing a plurality of alternate scanning operations on a document to obtain values corresponding to a plurality of alternately scanned pixels; and

digitizing the alternately scanned pixel values into even data values and odd data values; and

providing the even data values and the odd data values to the an application specific integrated circuit.

11. (New) The method of claim 9, wherein compensating the even-numbered pixel value and the odd-numbered pixel value comprises adding a corresponding odd-even compensation value to the even-numbered pixel value and the odd-numbered pixel value.

12. (New) An apparatus, comprising:

    circuitry adapted to receive a value from an even-numbered pixel and an odd-numbered pixel of a scanning device;

    circuitry adapted to produce an odd-even compensation value by use of the even-numbered pixel value and the odd-numbered pixel value; and

    circuitry adapted to compensate the even-numbered pixel value and the odd-numbered pixel value.

13. (New) The apparatus of claim 12, further comprising:

    an image memory unit adapted to hold a plurality of image data values; and

    an input/output interface adapted to access the image data values.

14. (New) The apparatus of claim 12, further comprising:

    an alternative-sensing device adapted to perform a plurality of alternate scanning operations on a document and sequentially obtain a plurality of values from alternately scanned pixels; and

    an analog/digital converter coupled to the alternative-sensing device adapted to digitize the alternately scanned pixel values in analog format into even data values and odd data values and transfer the even data values and the odd data values to said circuitry to receive a value.

15. (New) The apparatus of claim 12, and further comprising:

    circuitry adapted to perform a plurality of alternate scanning operations on a document to obtain values corresponding to a plurality of alternately scanned pixels; and

    circuitry adapted to digitize the alternately scanned pixel values into even data values and odd data values; and

circuitry adapted to provide the even data values and the odd data values to the an application specific integrated circuit.

16. (New) The apparatus of claim 12, wherein compensating the even-numbered pixel value and the odd-numbered pixel value comprises adding a corresponding odd-even compensation value to the even-numbered pixel value and the odd-numbered pixel value.